

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

- 1 1. A media storage device for storing and providing access to data media in a data
2 storage system comprising a data exchange device configured to exchange data stored on
3 the data media and a media handling system configured to transfer the plurality of data
4 media between the media storage device and the data exchange device, the media storage
5 device comprising a housing configured to receive the data media, the housing having a
6 first elongate alignment groove adapted to slidably engage with a corresponding first
7 elongate reference rail located adjacent an opening in a data storage system such that the
8 media storage device may be inserted and removed by slidably engaging the first elongate
9 reference rail and the first elongate alignment groove.
- 1 2. The media storage device of claim 1, further comprising a locking plate attached
2 to the housing and configured to engage a locking mechanism located in the opening in
3 the data storage system.
- 1 3. The media storage device of claim 1, wherein the housing has opposing top and
2 bottom portions, one of which has the first elongate alignment groove that is adapted to
3 slidably engage the first elongate reference rail and the other which has a second elongate
4 alignment groove that is adapted to slidably engage a second elongate reference rail.

1 4. The media storage device of claim 1, wherein the housing is molded from plastic.

1 5. The media storage device of claim 1, wherein the housing further comprises a
2 handle operationally attached to the housing and configured to enable an operator to apply
3 a force substantially parallel to the first elongate alignment groove such that when the
4 first elongate alignment groove engages the first elongate reference rail the media storage
5 device may be inserted and removed from the data storage system.

1 6. The media storage device of claim 3, wherein the housing has a side portion that
2 has a plurality of slots configured to receive the data media.

1 7. The media storage device of claim 3, further comprising:
2 a spring mechanism comprising a first end and a second end, the first end being
3 operationally attached to the top portion of the housing; and
4 a finger attached to the second end of the spring mechanism and extending into
5 the plurality of slots,
6 wherein the spring mechanism and the finger are configured to engage the data
7 media when received with the plurality of slots.

1 8. The media storage device of claim 6, wherein the plurality of slots are defined by
2 a plurality of dividers positioned in spaced-apart relation within the housing so that the
3 plurality of dividers are substantially parallel to the axis of the elongate slot.

1 9. The media storage device of claim 7, wherein the spring mechanism comprises a
2 metallic strip.

1 10. A method of storing data media in a data storage system, the data storage system
2 comprising a data exchange device configured to exchange data stored on the data media
3 and a media handling system configured to transfer the data media between a media
4 storage device and the data exchange device, the method comprising the steps of:
5 locating the data media within the media storage device, the media storage device
6 configured to receive the data media and having a first elongate alignment groove; and
7 inserting the media storage device into an opening in the data storage system by
8 engaging the first elongate alignment groove with a first elongate reference rail located
9 adjacent the opening in the data storage system and applying a force in a direction
10 substantially parallel to the first elongate alignment groove.

1 11. The method of claim 10, further comprising the step of locking the media storage
2 device in the data storage system by engaging a lock plate attached to the media storage
3 device with a locking mechanism in the data storage system.

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1 12. The method of claim 10, wherein the media storage device has opposing top and
2 bottom portions, one of which has the first elongate alignment groove that is adapted to
3 engage the first elongate reference rail and the other which has a second elongate
4 alignment groove that is adapted to engage a second elongate reference rail located
5 adjacent the opening in the data storage system.

1 13. The method of claim 10, wherein the step of locating the data media within the
2 media storage device comprise the step of applying a retention force to the data media
3 when the data media are located within the media storage device.

1 14. The method of claim 10, wherein the step of locating the data media within the
2 media storage device comprises the step of inserting the data media in a plurality of slots
3 located in a side portion of the media storage device.

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1 15. A media storage device for storing and providing access to data media in a data
2 storage system comprising a data exchange device configured to exchange data stored on
3 the data media and a media handling system configured to transfer the data media
4 between the media storage device and the data exchange device, the media storage device
5 comprising a housing configured to receive the data media, the housing having a means
6 for slidably inserting and removing the media storage device within an opening in a data
7 storage system by engaging the media storage device with an elongate reference rail
8 located adjacent the opening in the data storage system.

1 16. The media storage device of claim 15, further comprising a means for locking the
2 media storage device within the opening in the data storage system.

1 17. The media storage device of claim 15, wherein the means for slidably inserting
2 and removing the media storage device is a first elongate alignment groove in the
3 housing.

1 18. The media storage device of claim 15, wherein the means for slidably inserting
2 and removing the media storage device involves a first elongate alignment groove in a top
3 portion of the housing and a second elongate alignment groove in a bottom portion of the
4 housing.

1 19. The media storage device of claim 15, wherein the housing is molded from
2 plastic.

1 20. The media storage device of claim 15, further comprising a means for applying a
2 force substantially parallel to the first elongate alignment groove such that when the
3 means for slidably inserting and removing the media storage device engages the elongate
4 reference rail the media storage device may be inserted and removed from the opening in
5 the data storage system.

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